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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : KUSUMOTO, et al.
Appl. No. : 09/522,296

Filed : March 09, 2000
Title : GOLF CLUB HEAD

Group Art Unit : 3711
Examiner : PASSANITI, S.

Docket No. : 08203.341

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TECHNOLOGY CENTER R3700

APPELLANT'S BRIEF UNDER 37 C.F.R. § 1.192

October 9, 2002

Hon. Director of Patents
and Trademarks
Washington, D.C. 20231

Dear Sir:

In follow-up to the Notice of Appeal filed August 13, 2002, Appellant respectfully requests the Board of Patent Appeals and Interferences consider the following arguments and reverse the decision of the Examiner in whole.

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(1) Real Party in Interest

The real party in interest is DAIWA SEIKO, INC., assignee to the instant invention.

(2) Related Appeals and Interferences

There are no known related appeals or interferences, which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal.

(3) STATUS OF CLAIMS

1. Claims 1-29 were originally filed with the specification on March 09, 2000.
2. Claims 1-29 were subject to a written restriction dated July 5, 2001, identifying several distinct species throughout Figs. 1-30.
3. On August 1, 2001, Appellant elected Group I, directed to the subject matter of claims 1-21, 28 and 29 drawn to a golf club head.
4. In the Official Action dated October 11, 2001, the Examiner rejected claims 1, 6, 7, 8, 9, 10, 11, 12, 14, 15, 18, 28 and 29 under 35 USC § 102(b) as being anticipated by Mockridge (GB 2,230,459) (hereinafter referred to as Mockridge '459). Claims 1, 2, 3, 5 and 16 were rejected under 35 USC § 102(b) as being anticipated by Endo et al. (US 5,556,097) (hereinafter referred to as Endo '097). Claims 1, 13, 17 and 20 were rejected under 35 USC § 103 as being unpatentable over Mockridge '459 in view of Minabe (US 5,961,394) (hereinafter referred to as Minabe '394). Claims 2 and 4 were rejected under 35 USC § 103 as

being unpatentable over Mockridge '459 in view of Motomiya (US 4,438,931) (hereinafter referred to as Motomiya '931). Claim 19 was rejected under 35 USC § 103 as being unpatentable over Mockridge '459 in view of Mills (US 3,819,181) (hereinafter referred to as Mills '181). Claims 15, 19 and 28 were objected to because of minor informalities.

5. On February 4, 2002 Appellant filed Amendment and Request for Reconsideration amending claims 1, 15, 19 and 28 and presenting arguments for the patentability of claims 1-21, 28 and 29.

6. In the Final Official Action dated April 17, 2002, the Examiner rejected claims 1, 6, 7, 8, 9, 10, 11, 12, 14, 15, 18, 28 and 29 under 35 USC § 103(a) as being unpatentable over Mockridge '459 in view of Take et al. (US 5,575,723) (hereinafter referred to as Take '723), Helmstetter (US 5,042,806) (hereinafter referred to as Helmstetter '806) and Drajan et al. (US 6,033,318) (hereinafter referred to as Drajan '033). Claims 1, 2, 3, 5 and 16 were rejected under 35 USC § 103(a) as being unpatentable over Endo '097 in view of Take '723, Helmstetter '806 and Drajan '033. Claims 1, 13 and 20 were rejected under 35 USC § 103(a) as being unpatentable over Mockridge '459 in view of Take '723, Helmstetter '806, Drajan '033 and Minabe '394. Claims 2 and 4 were rejected under 35 USC § 103(a) as being unpatentable over Mockridge '459 in view of Take '723, Helmstetter '806, Drajan '033 and Motomiya '931. Claim 19 was rejected under 35 USC § 103(a) as being unpatentable over Mockridge '459 in view of Take '723, Helmstetter '806, Drajan '033 and Mills '181. Claim 17 was objected as being dependent upon rejected base claim. The Examiner noted that claim 17 would be allowed if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. On July 17, 2002, Appellant filed Request for Reconsideration and presented arguments for the patentability of claims 1-16, 18-21, 28 and 29.

9. On July 30, 2002 the Examiner issued an Advisory Action rejecting claims 1-16, 18-21, 28 and 29.

10. On August 13, 2002, Appellant filed a Notice of Appeal.

(4) STATUS OF AMENDMENT

The Office Action finally rejecting claims 1-16, 18-21, 28 and 29 was mailed on April 17, 2002. Subsequently, Appellant filed a Request for Reconsideration on July 17, 2002. The Request for Reconsideration presented arguments traversing the rejection of claims 1-16, 18-21, 28 and 29 under 35 U.S.C. § 103(a).

An Advisory Action was mailed July 30, 2002 in response to the Request for Reconsideration rejecting claims 1-16, 18-21, 28 and 29.

Applicant then filed a notice of appeal on O August 13, 2002 to appeal the Examiner's rejection of claims 1-16, 18-21, 28 and 29.

Subsequently, there have been no other papers filed by the Appellant or issued by the U.S. PTO.

(5) SUMMARY OF THE INVENTION

The instant invention is directed to a golf club head comprising a cast body constituted by a hollow outer shell defining a top portion, a sole portion, a heel wall and a toe portion. The golf club head further includes a shaft securing portion formed adjacent to the

heel wall and extended from the top portion of the outer shell to the sole portion thereof so that a hollow portion is formed between the shaft securing portion and the heel wall of the head body. The shaft securing portion is formed homogeneously with the hollow outer shell to provide a one-piece, unitary, homogenous body.

(6) ISSUES

1. Whether claims 1, 6, 7, 8, 9, 10, 11, 12, 14, 15, 18, 28 and 29 under 35 USC § 103(a) as being unpatentable over Mockridge '459 in view of Take '723, Helmstetter '806 and Drajan '033.
2. Whether claims 1, 2, 3, 5 and 16 are patentable over Endo '097 in view of Take '723, Helmstetter '806 and Drajan '033.
3. Whether claims 1, 13 and 20 are patentable over Mockridge '459 in view of Take '723, Helmstetter '806, Drajan '033 and Minabe '394.
4. Whether claims 2 and 4 are patentable over Mockridge '459 in view of Take '723, Helmstetter '806, Drajan '033 and Motomiya '931.
5. Whether claim 19 is patentable over Mockridge '459 in view of Take '723, Helmstetter '806, Drajan '033 and Mills '181.

(7) GROUPING OF THE CLAIMS

Claims 1, 6, 10, 11, 12, 13, 14, 15, 16, 18, 20 and 21 stand and fall together.

Claims 2, 3, 4 and 5 do stand and fall together.

Claims 7, 8 and 9 stand and fall together.

Claim 19 is separately patentable.

Claims 28 and 29 stand and fall together.

(8) ARGUMENTS

Sub-paragraph (i)

This sub-paragraph is not applicable to the instant appeal in so far as there are no rejections under 35 U.S.C. § 112, first paragraph.

Sub-paragraph (ii)

This sub-paragraph is not applicable to the instant appeal in so far as there are no rejections under 35 U.S.C. § 112, second paragraph.

Sub-Paragraph (iii)

This sub-paragraph is not applicable to the instant appeal in so far as the final rejection does not raise any issues under 35 U.S.C. § 102.

Sub-paragraph (iv)

Claims 1, 6, 7, 8, 9, 10, 11, 12, 14, 15, 18, 28 and 29 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Mockridge '459 in view of Take '723, Helmstetter '806 and Drajan '033. It is noted that claims 1 and 28 are independent claims, and claims 6, 7, 8, 9, 10, 11, 12, 14, 15 and 18 depends on independent claim 1, while claim 29 depends on independent claim 28.

Mockridge '459 fails to disclose a golf club head comprising a cast body constituted by a hollow outer shell defining a top portion, a sole portion, a heel wall and a toe portion, and a shaft securing portion extended from the top portion to the sole portion and formed homogeneously with the hollow outer shell to provide a one-piece, unitary, homogenous body. By contrary, the golf club head of Mockridge '459 has the sole plate (18), as part of the second shell part (12), formed separately from the first shell part (11). The socket (19) is extended from the sole plate (18) to the top (14).

Take '723, Helmstetter '806 and Drajan '033 fail to disclose "a shaft securing portion formed adjacent to said heel wall and extended from said top portion to said sole portion..."

Take '723 discloses two shaft support portions (73, 75) used to position the club shaft which fail to extend from the top portion to the sole portion of the golf club head in combination with cushioning members (81) and (83). See column 5, lines 10-13. The cushioning members (81, 83) are placed between the shaft and the shaft support portions (73 and 75) so that the cushioning members (81, 83) extend beyond the terminal end of the shaft supporting portions (71, 73). Take expressly states in column 4, lines 37-40 that the "portion of the shaft 29 disposed in the club body 45 is not supported around its entire periphery by a

peripheral wall ... integral with the head body 21." Removing the cushioning members would destroy the intended purpose of Take '723.

Regarding Helmstetter '806, here again the tube 36 has an internal orifice 42 that opens to the interior shell; the orifice 42 provides an entrance to the interior shell for the addition of a foam material 18. Column 3, lines 56-61. Making the shaft holding portion a unitary member without an orifice in Helmstetter '806 would destroy intended purpose of the invention.

Regarding Drajan '033, the prior art discloses a hosel 24 comprising a smaller tube 26 and a larger tube 28. As can be seen in Figure 1, the hosel 24 here again does not extend from the top portion to the bottom portion as the present application. Further, the Examiner asserts that it would have been obvious to modify Drajan '033 to make the shaft holding portion more rigid. Drajan '033 specifically states the annular space between the tubes is filled with an elastomeric substance to act as a shock absorber. Increasing the rigidity of the club head would undermine the intent of Drajan '033. The Examiner also states that it would have been obvious to homogenously form the club head of Drajan '033. Drajan specifically states that the sole plate is removable to be interchanged with other sole plates. This allows a golfer to change the weight of their club head. Thus forming the club head as a homogenous body would similarly destroy the intended purpose of Drajan '033.

Therefore, even if the modification and combination of Mockridge '459 and Take '723 and/or Helmstetter '806 and/or Drajan '033 could be made, the resulting golf club head would lack the hollow outer shell including the sole portion, and the shaft securing portion extended from the top portion to the sole portion and formed homogeneously with the hollow outer shell to provide a one-piece, unitary, homogenous body. Moreover, Mockridge '459

provides any motivation or suggestion to combine the disclosure of any of the prior art references. For that reasons, the rejection of claims 1, 6, 7, 8, 9, 10, 11, 12, 14, 15, 18, 28 and 29 under 35 USC §103(a) is improper.

Claims 1, 2, 3, 5 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Endo '097 in view of Take '723, Helmstetter '806 and Drajan '033. It is noted that claim 1 is independent claims and claims 2 and 16 depend on independent claim 1. Claims 3 and 5 depend on dependent claim 2.

Endo '097 fails to disclose a golf club head comprising a cast body constituted by a hollow outer shell defining a top portion, a sole portion, a heel wall and a toe portion, and a shaft securing portion extended from the top portion to the sole portion and formed homogeneously with the hollow outer shell to provide a one-piece, unitary, homogenous body. By contrary, the golf club head of Endo '097 has the upper surface member 3 (top portion) formed separately from the rest of the head body 1.

As argued above, Take '723, Helmstetter '806 and Drajan '033 fail to disclose "a shaft securing portion formed adjacent to said heel wall and extended from said top portion to said sole portion..." Therefore, even if the modification and combination of Endo '097 and Take '723 and/or Helmstetter '806 and/or Drajan '033 could be made, the resulting golf club head would lack the hollow outer shell including the top portion, and the shaft securing portion extended from the top portion to the sole portion and formed homogeneously with the hollow outer shell to provide a one-piece, unitary, homogenous body. Moreover, Endo '097 provides any motivation or suggestion to combine the disclosure of any of the prior art references. For that reasons, the rejection of claims 1, 2, 3, 5 and 16 under 35 USC §103(a) is improper.

Claims 1, 13 and 20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Mockridge '459 in view of Take '723, Helmstetter '806, Drajan '033 and Minabe '394. It is noted that claim 1 is independent claim, and claim 20 depends on independent claim 1. Claim 3 depends on claim 2 in turn depending on independent claim 1.

The arguments recited above regarding the rejection of claims 1, 6, 7, 8, 9, 10, 11, 12, 14, 15, 18, 28 and 29 equally apply to the rejection of claims 1, 13 and 20. Thus, the rejection of claims 1, 13 and 20 under 35 USC §103(a) is improper.

Claims 2 and 4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Mockridge '459 in view of Take '723, Helmstetter '806, Drajan '033 and Motomiya '931. It is noted that claim 2 depends on independent claim 1 and claim 4 depends on claim 2.

The arguments recited above regarding the rejection of claim 1 equally apply to the rejection of claims 2 and 4. Thus, the rejection of claims 2 and 4 under 35 USC §103(a) is improper.

Claim 19 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Mockridge '459 in view of Take '723, Helmstetter '806, Drajan '033 and Mills '181. It is noted that claim 19 depends on independent claim 1.

The arguments recited above regarding the rejection of claim 1 equally apply to the rejection of claim 19. Moreover, Mills '181 fail to disclose the golf club head wherein an upper end portion of the shaft securing portion is provided lower than a top of the top portion of the golf club head. Therefore, even if the modification and combination of Mockridge '459 and Take '723 and/or Helmstetter '806 and/or Drajan '033 and Mills '181 could be made, the resulting golf club head would lack the hollow outer shell including the sole portion, the shaft securing portion extended from the top portion to the sole portion and

formed homogeneously with the hollow outer shell to provide a one-piece, unitary, homogenous body, wherein an upper end portion of the shaft securing portion is provided lower than a top of the top portion. For that reason, the rejection of claim 19 under 35 USC §103(a) is improper.

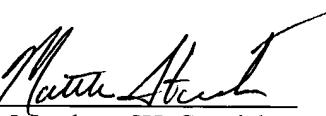
Sub-paragraph (v)

This sub-paragraph is not applicable to the instant appeal in so far as the final rejection does not raise any issues other than those referred to in sub-paragraphs (i)-(iv).

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance, and notice to that effect is earnestly solicited.

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(9) APPENDIX

1. A golf club head comprising:
 - a cast body constituted by a hollow outer shell;
 - said hollow outer shell defining a top portion, a sole portion, a heel wall and a toe portion;
 - a shaft securing portion formed adjacent to said heel wall and extended from said top portion to said sole portion; and
 - a first hollow portion formed between said shaft securing portion and said heel wall of said head body,
 - wherein said shaft securing portion is formed homogeneously with said hollow outer shell to provide a one-piece, unitary, homogenous body.
2. A golf club head according to claim 1, wherein said hollow outer shell defines a face opening portion, a face portion is fixed to said face opening portion.
3. A golf club head according to claim 2, wherein a second hollow portion is formed between said shaft securing portion and said face portion.
4. A golf club head according to claim 2, wherein said face portion is formed by forging.

5. A golf club head according to claim 2, wherein said face portion is formed by press working of a rolled plate member.

6. A golf club head according to claim 1, wherein a shaft securing hole penetrates said shaft securing portion in a region from said top portion to said sole portion.

7. A golf club head according to claim 1, wherein said shaft securing hole *of* said shaft securing portion has a bottom portion.

8. A golf club head according to claim 7, wherein said bottom portion is formed in a same surface of said sole portion of said head body.

9. A golf club head according to claim 7, wherein said bottom portion *of* said shaft securing hole has substantially the same thickness as the thickness *of* said sole portion.

10. A golf club head according to claim 1, wherein said hollow outer shell and said shaft securing portion are integrally molded with each other by precise casting.

11. A golf club head according to claim 1, wherein said shaft securing portion is formed into a cylindrical shape from said top portion to said sole portion.

12. A golf club head according to claim 1, wherein said first hollow portion is formed such that a clearance of 1 mm to 10 mm is defined between said shaft securing portion and said heel wall.

13. A golf club head according to claim 1, wherein said heel wall has a thickness of 0.3 mm to 2 mm.

14. A golf club head according to claim 1, wherein a width of said first hollow portion adjacent to said sole portion is wider than a width of said first hollow portion adjacent to said top portion.

15. A golf club according to claim 1, wherein an edge is formed between said sole portion and said heel wall at a heel side near said shaft securing portion.

16. A golf club head according to claim 1, wherein a first upper end of the inside portion of said toe portion is higher than a second upper end of the inside portion of said heel portion in a cross section passing through an axis of said shaft securing hole and along said face portion.

17. A golf club head according to claim 1, wherein a support portion connects said shaft securing portion and said heel wall.

18. A golf club head according to claim 1, wherein a hosel portion is formed at said top portion of said head body by projecting said shaft securing portion from said top portion.

19. A golf club head according to claim 1, wherein an upper end portion of said shaft securing portion is provided lower than a top of said top portion.

20. A golf club head according to claim 1, wherein said head body is formed from β -type titanium alloy.

21. A golf club head according to claim 2, wherein said head body is formed from $\alpha\beta$ -type titanium alloy, and said face 3 portion is formed from β -type titanium alloy.

28. A golf club head comprising:

a head body constituted by a hollow outer shell;

a shaft securing portion, homogeneously formed by casting with a top portion, and

a sole portion fixed to said top portion;

wherein a hollow portion is provided between said shaft securing portion and at least one of a heel portion and a face portion of said outer shell.

29. A golf club head according to claim 28, wherein a joining hole, for joining said shaft securing portion, is provided with the other of said top portion and said sole portion.